funded incomes which results from this struggle, — all subjects which form the essence and core of my book. I merely note these topics in order to enable your readers to judge for themselves the solidity and impartiality of my critic.

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DEPRECIATION AND RATE CONTROL
A QUESTION OF JUSTICE

PROFESSOR Allyn A. Young's recent heretical utterances on depreciation in the valuation of public service properties for the purpose of rate control, compel every true believer to gird on his armor and come forth in defense of the faith.[1] Professor Young's ideas are dangerous and his arguments are plausible; so all the more zeal for their destruction! So long as they had been advanced only by engineers and public utility experts employed by the corporations, or perhaps even by Mr. James E. Allison and the St. Louis Public Service Commission, there was no need for serious alarm. But when they are taken up by Professor Young, a vigorous thinker and a progressive economist of high standing, then indeed it is time to rush for the defense of righteous belief.

Professor Young's principal thesis is that when a public utility is newly brought under regulation and its property is valued for the purpose of rate control, to deduct accrued depreciation from cost new would be unjust to the investors. The rates to be fixed in any case will presumably be just so high that the revenues will cover operating expenses and bring a reasonable return upon the valuation. Professor Young assumes that in the great majority of instances, a public service company, before it was brought under active

[1] "Depreciation and Rate Control," Quarterly Journal of Economics, vol. xxviii, pp. 630–663, August, 1914.

regulation, did not include in operating expenses provisions for accruing depreciation and therefore did not build up a depreciation reserve; that instead it maintained the efficiency of the plant by charging to operating expenses the cost of replacements, and calculated its annual profits accordingly; that it had made its investments with the expectation that returns were to be received upon the full money outlay in the business, and had not made excessive gains from the property. If under such circumstances, the newly prescribed accounting standards require current depreciation to be included in operating expenses, and if the valuation upon which a return is allowed be cost new less past accrued depreciation, Professor Young urges that the company would not get the return the expectation of which induced the investment, and would therefore be treated unfairly by regulation.

Most economists and students of public utility matters probably do not agree with Professor Young's position. The danger, however, in formulating an adequate criticism against his view is to base one's argument upon pure scientific grounds, as if the matter involved fundamental principles of economics and accounting. This, it seems to me, is the difficulty with the recent criticism presented by Mr. Joseph S. Davis, in his otherwise very excellent discussion.[1] Professor Young does not base his conclusion on accounting principles, but on principles of justice or sound public policy, — which, incidentally, is also the basis for all public regulation, including valuation and the fixing of rates. When Mr. Davis, therefore, considers accrued depreciation as that part of the original value of the property which has been consumed in service, and presents it as an economic fact *which is*, whether shown in the accounts or not, he misses, it seems to me, the essential point in public utility valuation. Professor Young seems quite right when he urges that we have not to do with value as such but with *value for the purpose of rate regulation.* The one belongs in the realm of general economic law, but the other is wholly a thing of public policy.

[1] "Depreciation and Rate Control: A Criticism," Quarterly Journal of Economics, vol. xxix, pp. 362–378, February, 1915.

Mr. Davis appears to be entirely wrong when he insists that a public service corporation is rightly entitled to a return upon the *value* of its property, measured according to its productive power, shown in the accounts as cost less accrued depreciation. Not even in unregulated business can it be claimed correctly that the value of a property is equal to its cost less accrued depreciation (when the latter is based upon the cost and expected life of the different classes of property), unless special adjustments are made for the value of earning power greater or less than normal. The value of an industrial property is, of course, determined by earning power, or productive power (to use Mr. Davis' phrase), and not by cost, as Mr. Davis' argument seems to imply. But in regulated business, we are not seeking the value of a property but a fair valuation for the purpose of control. It is true, the courts in the consideration of rate cases have quite consistently held that it is the " value " of its property upon which a company has a constitutional right to earn a reasonable return; still, practically they have allowed valuations to be made for the most part on the cost of reproduction basis, with due allowance for accrued depreciation. This, it should be emphasized, is not value in the sense used by Mr. Davis, but value for rate regulation as considered by Professor Young. It should be clear that if economic or market value were to be taken as the basis of rates, regulation would be useless, for it would get nowhere. Value would be dependent upon earning power, which would depend upon the rates to be fixed,—the familiar circle.

Actually, however, whatever the language of the courts may be, it is not value but cost which has become the accepted basis of rate regulation, and the proper basis of valuation, let us repeat, is not a matter of economic law, but one entirely of public policy. And in deciding upon the best policy we may very well consider actual cost as against cost of reproduction, or in either case whether the cost should be new or with deduction for accrued depreciation, or even with deductions for other matters. The decision must rest upon broad expediency, which, of course, involves questions of

justice as between the immediate owners and the public, for whose welfare the property is to be operated.[1]

What we wish, it seems, is such a policy of valuation for rate control as will serve best or promote most the general welfare. It is not to be doubted that Professor Young admits regulation itself to be desirable. If a given policy *in general* promises to serve the public interest best, it should not be set aside merely because some individuals or relatively small classes are likely to suffer some injury or inconvenience. Regulation apart from the question of valuation, in so far as it has hampered opportunity for personal gains, has unquestionably brought losses to special classes; but surely it cannot be considered socially unjust for that reason, so long as it has really promoted the welfare of the country at large. And the question of valuation should be viewed in exactly the same way. Still, we should avoid so far as possible any serious individual injury or loss.

From the broad view just presented, it seems that Professor Young has disregarded several important considerations, which, if given proper weight, might easily have led him to a different conclusion than that he has presented. Possibly Professor Young may not agree at all as to the best policy with the almost universal practice in providing for complete maintenance of public service properties. The present almost universal practice is to require the inclusion in operating expenses of charges for so-called current depreciation, in addition to the cost of all minor replacements. Then as major replacements are made, they are charged to the property accounts, and the depreciation reserve is debited with the original cost of all property retired. Apparently in the case of large and varied properties at least, Professor Young would prefer a somewhat different procedure. Instead of providing currently for accruing depreciation, he would charge to operating expenses the cost of all replacements as they are made, thus avoiding what he terms a useless reserve. I do not consider that there is here a great economic principle at

[1] A friend, Mr. P. W. Saxton, suggests quite rightly that the proper method of valuation involves also a question of justice between the present generation of utility users and following generations.

stake; we are dealing merely with desirable operating practice, and I believe that the prevailing methods are for the most part sound.[1] Professor Young, however, appears not to object especially to making provision for complete maintenance through depreciation charges, and in so far as such charges have been made he seems not to object in valuation to deducting accrued depreciation from the cost new of the property.

Suppose, then, we decide for the future to make depreciation charges, with the general idea of including in rates a reasonable return upon the cost of the property with deduction for accrued depreciation. Professor Young, then, apparently admits that this basis of valuation would not be unjust and that perhaps it may be the most desirable in reference to depreciation accrued and charged to operating expenses after the new policy was established. But he would consider it unjust in so far as it were to apply to depreciation accrued before regulation was begun. But if the general policy for the future is desirable, then Professor Young should consider the practical difficulty of determining in any appraisal with even rough accuracy between depreciation accrued before regulation was established and that accrued during the period of regulation, — the latter to be deducted from cost and the former not. If in general, for the future, cost less accrued depreciation is the desirable basis of valuation, then the injustice that would be wrought upon investors by following the method throughout, should be very clear and really serious, before we attempt the tremendous difficulty of determining in any case the depreciation accrued prior and that accrued subsequently to any particular time.

[1] Undoubtedly the operating efficiency of a property would be maintained equally well whether depreciation or the cost of replacements were charged to operating expenses. The principal objection to the second method is that complete maintenance charges would be irregular from year to year, probably even in the case of a very large and varied property. A second objection is, it would be difficult in many cases to distinguish between additions or betterments, which would be chargeable to the property accounts, and replacements, which should go to operating expenses. Of course, all installations might be charged to the property accounts, including in operating expenses the original cost of property retired. This procedure, however, would probably increase the irregularity of operating charges. It is doubtless chiefly on account of these difficulties that the prevailing practice has become established.

If the method in general is satisfactory, the special desirability of departing from it in any way should be shown beyond much possibility of doubt. This, it seems to me, Professor Young has not shown.

Let us assume that the *general* method of valuation followed by the commissions is desirable, and that on account of the difficulties involved, no departure should be made from it unless fairly serious injustice would be brought upon special classes in society. In this connection it is worth while to point out several important facts which Professor Young passed over with slight, or without any consideration. In the first place, we must remember that before regulation was actively begun, public utilities had no regard for costs in fixing rates or prices for their services. They charged what the traffic would bear, making in each case all the profit that they could. True, on the average they were probably not excessively profitable; but nevertheless, they took all they could, and in no case of inadequate returns would the profits probably have been less under regulation. Some properties were undoubtedly profitable beyond reason, the average probably made just reasonable returns, and some certainly did not justify their investment, but nevertheless had a free chance to do so. Where, then, is the clear injustice if in valuation throughout we deduct for all past accrued depreciation?

Since the time of the so-called Granger cases it has been undoubted law that public utilities were invested with a public interest and subject to rate regulation. Every investment has been made subject to this public right. If for a long time the right was not definitely formulated into a policy, it nevertheless existed, and the investors have known that it was there. Have they suffered by the non-use? If now, therefore, we definitely formulate the right and enforce it, who is seriously injured? Certainly the investors in the highly profitable or even in the average properties have no cause for complaint, for we might have regulated them sooner. The others had a free chance to get all the profit that they could, and for the future they will still have the opportunity, if the business will permit it, to charge such rates as to bring

reasonable returns upon their investment as defined by accepted valuation standards. If they were not profitable in the past, they may not be so in the future, but they will still have the opportunity of obtaining fair profits, and will probably be better guarded from competition. Where, then, is the serious injustice ?

Actual valuation policy, in so far as it has been worked out, is based upon cost of reproduction and not the actual cost of the property, much less the cost to the corporation. If long ago actual cost had been made the basis of valuation, investors would have had no ground for objection; the basing of returns upon actual investment would then be fair enough. Now, however, we base the valuation upon the cost of reproduction, which in view of the high level of present prices, results in most cases in a valuation appreciably greater than actual investment. In the case of old properties, where the apparent injustice which Professor Young urges would be the greater, the excess of reproduction cost over actual investment is also the greater, — for the most part probably fully or more than offsetting accrued depreciation.[1] Should this point not be considered pretty thoroly before we make an exception to an otherwise desirable method of valuation ?

Professor Young has curiously passed over a point in current practice, which, it seems to me, disposes of any doubt in the question before us. He makes no reference to so-called *going-value*, which is allowed in a physical appraisal by most of the state commissions and seems to be required by the courts.[2] While going-value has not been definitely and authoritatively defined, it covers for the most part early developmental expenses incurred by a company, operating deficits, and deficiencies in reasonable return upon investment. Thus, the official valuation in any case is the cost of the prop-

[1] Since 1897, general prices have advanced fully fifty per cent, and land used for utility purposes usually several hundred per cent, while even in the case of a very old and stationary property, the extreme accrued depreciation over actual cost cannot be over fifty per cent. The term actual investment means the money cost of a property at the time of installation of the several parts.

[2] See Kings County Lighting Case, 210 N. Y. 479.

erty, less accrued depreciation, plus going-value. If a company from the first has obtained a reasonable return upon its investment, that is all that it was entitled to receive and for the future it will be treated fairly enough if it may get a return upon the cost of the property less accrued depreciation. But, if it has not been reasonably profitable, the deficiencies may be capitalized and added as going-value to the physical valuation of cost less accrued depreciation. With going-value or past unprofitableness thus provided for, where is the injustice upon which Professor Young so forcefully insists ?

As a matter of fact, considering the policy of valuation as it now stands, with cost of reproduction and allowance for going-value, are we not rather more than just to the investors ? Would the ordinary sense of justice be especially outraged if accepted valuation did not allow the capitalization of operating deficits and deficiencies in return, or were to include only actual cost less depreciation ? But we include even land or other property granted free to corporations by federal, state, or municipal governments; we often allow items for which no costs were incurred by the investors, and in some cases there appears an inclination even to allow the capitalization of franchises on the basis of earnings, — thus promising to shut off all possibilities of rate reduction.[1] If going-value is to be allowed in case of deficiency in past returns when the company has fixed prices with regard only to maximum profits, may we not suggest that a corresponding deduction from the physical valuation might be made when excessive returns have been realized ? While there have been some judicial dicta in line with this suggestion, the idea has never been seriously advanced. But, if justice to investors really demands an addition to physical valuation for past deficiencies in return, is it not reasonable to ask whether justice to the public would not require a reduction for excessive actual returns ? If investors are entitled to a fair return on their

[1] See the Patterson Gas Case, Public Service Gas Co. *v.* Board of Public Utility Commissions, New Jersey Court of Errors and Appeals, November Term, 1913, decided December 10, 1914. — It is stated that a rehearing is to be held on this case.

investment and no more, and if deficient returns shall be added to the investment, then why should not excessive returns be deducted from the investment ?

I do not wish to support the suggestion just made, but it has nevertheless a place in the consideration whether present valuation practice is unjust to investors. Much may be urged in criticism of existing valuation practice; but in view of the above considerations, Professor Young had an exceedingly difficult task in making out a case of injustice to investors. Has he succeeded ?

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